

U.S. Fish & Wildlife Service
Bay Delta Fish & Wildlife Office
Species Account
VALLEY ELDERBERRY LONGHORN BEETLE
Desmocerus californicus dimorphus

CLASSIFICATION: Threatened

Federal Register 45:52803; August 8, 1980

http://ecos.fws.gov/docs/federal_register/fr449.pdf

On Feb. 14, 2007 we completed a 5-year review, which recommended that the species be delisted. A delisting proposal has not yet been released.

CRITICAL HABITAT: DESIGNATED

Federal Register 45:52803; August 8, 1980.

http://ecos.fws.gov/docs/federal_register/fr449.pdf See [map](#) (PDF)

RECOVERY PLAN: FINAL

[Valley Elderberry Longhorn Beetle Recovery Plan](#) (PDF), 6-28-84. This plan is now out-dated.

DESCRIPTION

Longhorn beetles (family Cerambycidae) are characterized by somewhat elongate, cylindrical bodies with long antennae, often more than 2/3 of the body length. Valley elderberry longhorn beetles (*Desmocerus californicus dimorphus*) are stout-bodied. Males range in length from about 1/2 to nearly 1 inch (measured from the front of the head to the end of the abdomen) with antennae about as long as their bodies. Females are slightly more robust than males, measuring about 3/4 to 1 inch, with somewhat shorter antennae. Adult males have red-orange elytra (wing covers) with four elongate spots. The red-orange fades to yellow on some museum specimens. Adult females have dark colored elytra.

There are four stages in the animal's life: egg, larva, pupa and adult. The species is nearly always found on or close to its host plant, elderberry (*Sambucus* species). Females lay their eggs on the bark. Larvae hatch and burrow into the stems. The larval stage may last 2 years, after which the larvae enter the pupal stage and transform into adults. Adults are active from March to June, feeding and mating.

It appears that in order to serve as habitat, the shrubs must have stems that are 1.0 inch or greater in diameter at ground level. Use of the plants by the animal is rarely apparent. Frequently, the only exterior evidence of the shrub's use by the beetle is an exit hole created by the larva just before the pupal stage. Field work along the Cosumnes River and in the Folsom Lake area suggests that larval galleries can be found in elderberry stems with no evidence of exit holes. The larvae either succumb before constructing an exit hole or are not far enough along in the developmental process to construct an exit hole.



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DISTRIBUTION

At the time of listing in 1980, the beetle was known from less than 10 locations on the American River, Putah Creek and Merced River. Now it is known to occur from southern Shasta County to Fresno County. There are about 190 records, mostly based on exit holes.

THREATS

Extensive destruction of California's Central Valley riparian forests has occurred during the last 150 years due to agricultural and urban development. According to some estimates, riparian forests in the Central Valley have declined by as much as 89 percent during that time period. The valley elderberry longhorn beetle, though wide-ranging, is in long-term decline due to human activities that have resulted in widespread alteration and fragmentation of riparian habitats, and to a lesser extent, upland habitats, which support the beetle.

The primary threats to survival of the beetle include:

- Loss and alteration of habitat by agricultural conversion
- Inappropriate grazing
- Levee construction, stream and river channelization, removal of riparian vegetation and rapping of shoreline
- Nonnative animals such as the Argentine ant, which may eat the early phases of the beetle
- Recreational, industrial and urban development.

Insecticide and herbicide use in agricultural areas and along road right-of-ways may be factors limiting the beetle's distribution. The age and quality of individual elderberry shrubs/trees and stands as a food plant for beetle may also be a factor in its limited distribution.

We have specific [Conservation Guidelines for the Valley Elderberry Longhorn Beetle](#) (PDF). Contact our office for more information.

REFERENCES FOR ADDITIONAL INFORMATION

Barr, C. 1991. The Distribution, Habitat, and Status of the Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus*. Sacramento, CA.

Eng, L. L., 1984. Rare, threatened and endangered invertebrates in California riparian systems. In: California riparian systems Ecology, conservation, and productive management, ed. R. E. Warner and K. M. Hendrix. Berkeley: University of California Press.

Thelander, C. ed. 1994. Life on the edge: a guide to California's endangered natural resources. BioSystem Books. Santa Cruz, CA. p 414-415.

U.C. Berkeley, Essig Museum of Entomology. [California's Endangered Insects](#).

U.S. Fish and Wildlife Service. 1996. [Valley elderberry longhorn beetle consultation with the U.S. Army Corps of Engineers](#). Sacramento, California. Appendix: [Conservation Guidelines for the Valley Elderberry Longhorn Beetle](#) (PDF), Updated July 9, 1999.

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